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ABSTRACT

This study examines the relationship between teachers' criteria for grouping children and the socioeconomic status of those children, and investigates the extent of the socioeconomic segregation which is occurring in classrooms because of teachers' grouping practices. The sample consists of 37 elementary school teachers and their students. The teachers were asked to recommend their pupils for placement in high, middle, or low reading groups for the following year and name the criteria on which they based the placement of each child. These ratings were then compared with another rating of the same pupils based on reading comprehension test scores. A comparison of the two ratings shows that teachers placed some pupils in groups other than indicated as appropriately by their reading test scores. An examination of the rating criteria indicates that teachers rely mainly on perceived ability, achievement, and work habits; however, some students were misplaced on the basis of nonacademic criteria relating to social class. The author concludes that these findings do not fully support the commonly held belief that teachers are furthering socioeconomic segregation in their classrooms by using criteria for grouping which are related to students' socioeconomic status. (RWP)

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STUDENTS' SES AS RELATED TO TEACHERS' PERCEPTIONS AND ABILITY GROUPING DECISIONS

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Ability grouping is a common practice in American public schools. At the elementary level the most popular use of ability groups is for reading instruction. At the secondary level students are often assigned to "tracks," or sequences of curricula, which are designed to take into account differences in ability. This assignment to ability groups is one of the most important decisions made by school personnel, for studies show that once a child is placed in an ability group, he is very likely to remain in that group throughout his school career.[1] Thus, levels of expectation may be set which affect subsequent performance, constrain later decisions regarding high school curricula, and eventually limit choices regarding further education.

The practice of placing students in ability groups has been especially criticized as a form of segregation which further perpetuates discrimination against those from lower socioeconomic groups.[2] This is because studies have shown that children from middle and upper socioeconomic status homes are over-represented in the high ability groups, while lower socioeconomic status children are more commonly placed in the low ability groups.[3] Ability grouping may be particularly detrimental to lower status children for they are often taught less and expect less of themselves than children placed in higher groups. As a result, they are far less apt to go to college and may only be prepared for low-income jobs.[4]

One of the reasons that ability grouping segregates pupils along socioeconomic lines is because of the positive correlation between I.Q. and socioeconomic status found in the population.[5] However, there is some evidence to suggest that socioeconomic criteria play a role in

furthering this separation. Children with all types of ability are born to parents of low as well as high status. Yet, the children from low status families are consistently placed in lower ability groups, while high status children are placed with other high status children, often whether or not their ability warrants it.[6]

An additional mechanism contributing to the SES-ability group correlation may be the decision process teachers use in assigning students to groups. It has been suggested that teachers' perceptions of children, particularly on non-intellective factors, may be related to those children's SES. For example, pupils who are perceived as "disinterested" by their teachers are more likely to be assigned to lower ability groups than their measured intelligence or achievement would seem to indicate as appropriate.[7] Since teachers' judgments are commonly employed in making the grouping decision, teachers may be furthering socioeconomic segregation of groups by using criteria for grouping which are related to children's SES.

Two studies which offer some evidence that teachers are contributing to socioeconomic segregation in their classrooms are an observational study of a single class of ghetto children by Rist[8] and a large scale study of 72 schools in Great Britain by Barker Lunn.[9] Rist found that the kindergarten teacher formed subjective judgments about students based upon social class criteria and separated them into groups reflecting the social status composition of the class. A similar process of separation occurred in grades one and two, with children generally being assigned to the same ability groups as used by the previous teacher.

Barker Lunn found that grouping involved to some extent segregation

of the social classes. The relationship between academic performance and social class accounted for part of the allocation to groups. However, the teacher's judgment of a child's ability was apparently influenced by his type of home, for there was a tendency for teachers to over-estimate middle class children's ability and to under-estimate that of working class children. Because teacher judgments were solicited in making the grouping decision, socioeconomic segregation was furthered beyond what could be expected if the children's test scores were the basis for placement.

The research reported here is the third in a series of studies designed to illuminate the mechanisms which result in the SES-ability group correlation. The first focused on how teachers perceive differences among students.[10] The second was designed to specify the exact role of teachers' perceptions of children in making grouping decisions.[11] This research investigated how socioeconomic status enters into the grouping process employed by teachers when assigning children to intra-class reading ability groups and the effect of ability grouping on classroom socioeconomic segregation.

This study had two main objectives. One was to examine the relationship between teachers' criteria for grouping children and the socioeconomic status of those children. We suggested that teachers' perceptions of students' ability, achievement, work habits, classroom adjustment and ascribed characteristics are associated with the students' SES. Since teachers group students on the basis of these perceived characteristics, classroom reading groups formed by teachers may be segregated to a greater extent than reading groups formed on the basis of students' measured achievement. The second objective was to estimate the extent

of the socioeconomic segregation which is occurring in classrooms because of teachers' ability grouping practices.

Method

A convenience sample of thirty-seven fourth, fifth and sixth grade teachers and their students from four school districts in central New York State took part in this study. Near the end of the school year these teachers were asked to recommend their pupils for placement in high, middle or low reading groups the following year. Teachers were also asked to name the criteria on which they based the placement of each child. The interviewer, who had already ranked the pupils from high to low on the basis of their reading comprehension scores on the Iowa Test of Basic Skills, grouped the students into high, middle and low groups on the basis of their test scores, using the same placement ratio as the teacher. Comparing test score only groups with teacher formed groups showed that some pupils were "misplaced" by their teachers. That is, they were placed by teachers in higher or lower groups than indicated as appropriate by their reading test scores. Teachers were probed particularly about their reasons for grouping these "misplaced" pupils.

Another part of the data collection involved obtaining an SES score for each student in the sample. This was done by administering The Home Index,[12] a brief objective inventory for assessing socioeconomic factors in the home and family environment. Since group administration was possible, it was the most convenient and quickest way of measuring the SES of 914 pupils. However, since there was some question as to the

validity of this questionnaire, an item analysis was done. Thirteen of the 22 questions were found to discriminate between upper and lower SES families,[13] and only these were used in obtaining an SES score which ranged from 0-13.

Next, the criteria teachers named for placing children into reading groups were assigned to five classification categories. The first category included all mentions by teachers of items related to a child's ability (e.g. "high I.Q."). The second criterion category referred to achievement related percepts (e.g. "fair oral reader"). Work habit related percepts were assigned to the third category (e.g. "hard worker"). The fourth category included statements about classroom adjustment (e.g. "behavior problems"), and the fifth category was that of ascribed characteristics (e.g. "poor home background"). These criteria were also coded as to whether they connoted a positive, neutral or negative percept. For example, in the area of ability, "very brilliant" and "above average ability" were considered positive percepts; "average ability," a neutral percept; and "low ability," a negative percept. Finally, these percepts were assigned the appropriate SES index of the student for whom used.

Upon completion of this process, data collected and coded consisted of students' scores on the reading comprehension part of the Iowa Test of Basic Skills (assumed to represent a child's reading ability); students' SES scores; teachers' placement of students in high, average and low reading groups; students' reading group placement on the basis of test scores; and teachers' criteria for grouping each child, categorized and coded as described. Our use of these data will be described in the next section along with the results obtained. We will examine the socio-economic segregation which occurs in classroom ability groups, examine

teachers' percepts for grouping children, and assess the extent to which teachers contribute to classroom ability group segregation.

Results

Since so many studies have reported that ability grouping results in socioeconomic segregation in classrooms, we tested the hypothesis that reading ability groups formed by teachers in this sample are segregated along socioeconomic lines. The mean SES indices of all 914 students placed by teachers in high, average and low ability groups were computed. The means were found to be in rank order from high to low with the high reading group having the highest mean SES. An analysis of variance of the differences in means resulted in an F value significant at the .01 level. Thus, we concluded that reading ability groups formed by teachers were segregated socioeconomically.

However, because much of the segregation found is due to the positive correlation between SES and reading ability, our second hypothesis tested this relationship by stating that reading groups formed on the basis of children's measured ability in reading are segregated along socioeconomic lines. The mean SES indices were computed for the students who had been assigned to reading ability groups on the basis of their test scores alone. Again, the means were in rank order and found to be significantly different when tested with analysis of variance. Grouping on the basis of test scores only resulted in socioeconomic segregation in our sample.

Comparing the mean SES indices of test score and teacher formed high, average and low groups revealed that teachers were furthering the gap between high and low groups in terms of SES. Table I illustrates that

TABLE I: SES MEANS FOR TOTAL SAMPLE

	Test score groups	Teacher formed groups
Group 1- High	7.24	7.46
Group 2- Average	6.17	5.88
Group 3- Low	5.53	5.30

the mean of teacher formed high reading groups was greater than that of high test score groups, while the teacher formed low groups had a lower mean SES than the low test score groups. These differences result because teachers "misplace" students. They assign some students to reading groups different than indicated as appropriate by their reading test scores. In this sample, 13 percent were found to be "upwardly misplaced" and 13 percent "downwardly misplaced."

Because we suggested that teachers' perceptions of students are related to socioeconomic status of the students, we next tested the hypothesis that teachers' criteria for placing children in reading groups are related to the children's socioeconomic status. The criteria used by teachers were divided into five categories: ability, achievement, work habits, classroom adjustment, and ascribed characteristics. In each of the five categories, the mean SES indices for positive, neutral and negative criteria were computed. Table II shows that positive criteria were associated with the highest mean SES indices and negative percepts with the lowest mean SES indices in every category. An analysis of variance of the differences in group means resulted in an F statistic significant

TABLE II: TEACHERS' USE OF GROUPING CRITERIA

		Positive	Neutral	Negative	Total
Ability Related Criteria	Number	182	76	92	350
	Percentage	52	22	26	100
	Mean SES	7.21	5.72	4.99	
	F ratio=30.21				
Achievement Related Criteria	Number	194	84	163	441
	Percentage	44	19	37	100
	Mean SES	7.41	6.00	5.26	
	F ratio=38.72				
Work Habits Related Criteria	Number	256	79	196	531
	Percentage	48	15	37	100
	Mean SES	6.79	6.62	5.91	
	F ratio=7.21				
Classroom Adjustment Criteria	Number	112	43	160	315
	Percentage	36	14	51	100
	Mean SES	6.97	6.02	5.68	
	F ratio=9.13				
Ascribed Characteristics Criteria	Number	75	65	115	255
	Percentage	29	26	45	100
	Mean SES	7.73	5.98	5.32	
	F ratio=26.54				

at the .01 level for each of the five criterion categories, supporting the conclusion that teachers' criteria for grouping pupils for reading are related to the pupils' socioeconomic status. Teachers are more apt to apply positive criteria to higher SES students and negative criteria to lower SES students.

Teachers' usage of these criteria was also examined. Percepts related to work habits were mentioned most, followed by achievement related criteria and ability related criteria. These three categories represented approximately 70 percent of the percepts teachers used for grouping. Previous studies indicate that teachers rely heavily on perceived ability and achievement in making grouping decisions. However, the use of percepts related to work habits seems to be less pertinent to reading grouping and yet was the most frequently used category. Teachers apparently believe that a student's work habits have much influence on his reading achievement. Therefore, use of work habit related criteria may be another way of assessing a child's probable reading performance.

Teachers also used criteria for grouping that have little direct relationship to reading achievement or ability. Categories of classroom adjustment and ascribed characteristics accounted for 30 percent of teachers' percepts for grouping students. In these two categories teachers were more likely to mention negative percepts for grouping than positive percepts. The negative percept may be interpreted as a direct hindrance to a child's reading achievement, and so is mentioned by teachers as an impediment to a student's learning. For example, when a teacher mentions "family life is upsetting," "no interest from home," "social problems" or "immature" as reasons for placing children in reading groups, these apparently stand out as having detrimental effects on children's reading performance.

After finding that the percepts teachers used for grouping for reading instruction were related to the children's socioeconomic status, the percepts teachers applied to children whom they "misplaced" were examined. Table III summarizes the use of positive, neutral and negative percepts in upward and downward misplacement.

In upward movement from an average test score group to a high teacher formed reading group, positive percepts were more important than neutral or negative percepts. All mentions of ability were positive, and 75 percent of achievement mentions were positive. None of the children moved up from Group 2 (average) to Group 1 (high) had negative mentions of ability or achievement. Positive percepts of work habits and classroom adjustment were also cited in the majority for these students. The few negative percepts in the categories of work habits, classroom adjustment and ascribed characteristics which were used to describe a few of the students moved from Group 2 to 1 obviously did not detract from those students' perceived positive characteristics in other areas. Positive ability, achievement and work habit percepts appear to be most important in moving these pupils upward.

Teachers also moved students from a low test score group to an average reading group mainly on the basis of ability, achievement and work habits. The majority of percepts teachers used in these three areas were positive or neutral. A neutral percept indicates average ability, achievement or work habits which means Group 2 placement is appropriate. Apparently negative percepts mentioned by teachers did not prevent a child from getting moved up. Those perceived as having low ability or achievement were moved up for other reasons. Teachers made such comments as "very hard worker," "outstanding citizen--very responsible," "improved," "learns

TABLE III

TEACHERS' USE OF GROUPING CRITERIA FOR MISPLACED STUDENTS

Upward Movement (2 to 1)

Category	Positive No.	%	Neutral No.	%	Negative No.	%	Total No.	%
Ability	23	100	0	0	0	0	23	100
Achievement	21	75	7	25	0	0	28	100
Work Habits	20	65	5	16	6	19	31	100
Classroom Adjustment	11	58	3	16	5	26	19	100
Ascribed Characteristics	6	40	4	27	5	33	15	100

Upward Movement (3 to 2)

Category	Positive No.	%	Neutral No.	%	Negative No.	%	Total No.	%
Ability	5	23	10	45	7	32	22	100
Achievement	2	6	16	52	13	42	31	100
Work Habits	12	39	4	13	15	48	31	100
Classroom Adjustment	8	38	1	5	12	57	21	100
Ascribed Characteristics	1	5	5	28	12	67	18	100

Downward Movement (1 to 2)

Category	Positive No.	%	Neutral No.	%	Negative No.	%	Total No.	%
Ability	10	68	6	38	0	0	16	100
Achievement	11	39	8	29	9	32	28	100
Work Habits	11	33	6	18	16	49	33	100
Classroom Adjustment	7	28	3	12	15	60	25	100
Ascribed Characteristics	2	10	6	30	12	60	20	100

Downward Movement (2 to 3)

Category	Positive No.	%	Neutral No.	%	Negative No.	%	Total No.	%
Ability	2	9	3	13	18	78	23	100
Achievement	4	11	1	3	31	86	36	100
Work Habits	10	31	3	9	19	59	32	100
Classroom Adjustment	3	10	2	7	24	83	29	100
Ascribed Characteristics	2	11	3	17	13	72	18	100

more in middle group," and "wouldn't fit socially with Group 3 (low group) members." Even though more negative than positive percepts were mentioned in the classroom adjustment and ascribed characteristics categories, students were still moved upward on the basis of positive mentions in other areas. Perhaps some of the students with negative ascribed characteristics attributed to a bad home environment were moved upward by teachers in an attempt to help the students overcome the detrimental influences of their homes. A comment such as "bad home--school uplifts" indicates that this may have occurred.

Downward movement from Group 1 to 2 was associated with mainly negative or neutral grouping percepts. Since neutral percepts represent average ability, achievement and work habits and no effect one way or the other on classroom adjustment and ascribed characteristics, they are consonant with Group 2 placement. The only percepts which seemed to contradict downward misplacement were the positive ability mentions. Since 68 percent of these were positive, teachers apparently viewed negative percepts in other areas as being more important in the placement of these students. The categories of classroom adjustment and ascribed characteristics appeared to carry a lot of influence since 60 percent of the mentions in each were negative.

Students moved downward from Group 2 to 3 were grouped on the basis of a majority of negative percepts in every category. Negative mentions of achievement were most frequent, followed by classroom adjustment, ability, ascribed characteristics and work habits.

As a result of teachers' use of grouping criteria related to SES, there was socioeconomic segregation among misplaced pupils. Those who were moved upward had a significantly higher mean SES than those who were moved downward. Table IV shows this data for the 26 percent of the sample who were misplaced.

TABLE IV: MISPLACED PUPILS (TOTAL SAMPLE)

Type of misplacement	Number of students	Mean SES index
Upward	120	6.32
Downward	119	5.47

t=2.65 (significant at the .01 level)

The final part of this research was to measure the extent of the segregating effect in classrooms of teachers' use of grouping criteria related to SES. It was reasoned that if teachers' use of perceived criteria was furthering socioeconomic segregation in classrooms, then reading groups formed by the addition of teacher judgment would show a greater socioeconomic segregation than those formed on the basis of reading test scores alone.

To be able to compare the segregation of a reading group formed on the basis of test scores with the segregation of the comparable group formed by the teacher, the variance of the SES indices of pupils placed in each group was computed. If the teacher was furthering the socioeconomic segregation of a particular group in her classroom, the variance of the SES indices of students in that group would be less than the variance of the comparable test score group. That would be considered as evidence that the teacher was furthering socioeconomic segregation of reading groups in her classroom by placing students with similar socioeconomic status together.

Table V illustrates how the addition of teacher judgment affected the SES variances of reading groups. In each classroom SES variances of

TABLE V: COMPARISONS OF VARIANCES OF SES SCORES OF TEACHER FORMED READING GROUPS WITH TEST SCORE READING GROUPS

	Classroom reading groups					
	High		Average		Low	
	No.	%	No.	%	No.	%
Variance less in teacher group than in test score group	20	54	22	59	19	51
Variance greater in teacher group than in test score group	17	46	15	41	18	49
Total	37	100	37	100	37	100

high, average and low reading groups formed by test scores only were compared with the SES variances of reading groups formed by teachers. The SES variances were less in the teacher formed reading groups for 54 percent of the high groups, 59 percent of the average groups, and 51 percent of the low ability groups. The SES variances were higher or remained the same in 46 percent of the high groups, 41 percent of the average groups and 49 percent of the low groups. This means that teachers furthered socioeconomic segregation of ability groups in slightly over half of the reading groups in this sample. These proportions are not statistically significant.

Conclusions and Implications

This study examined the problem of how ability grouping in reading leads to socioeconomic segregation in classrooms by focusing on the role of teacher judgment in assigning children to intraclass reading groups.

The conclusions presented here are based upon our findings from thirty-seven classrooms in central New York State.

Our assumption that criteria teachers use for grouping by ability are related to students' socioeconomic status was supported. Positive criteria were associated with the highest mean SES and negative grouping criteria were associated with the lowest mean SES in each criterion category. Therefore, when teachers grouped for reading using these criteria, socio-economic segregation resulted. This finding was supported by the fact that the mean SES indices of students assigned to three reading ability group levels were in rank order, with the highest mean associated with the high ability group. The differences in these mean SES indices were significant.

However, we conclude that reading test scores are also related to students' socioeconomic status. When reading groups were formed artificially on the basis of rank on a reading test, socioeconomic segregation also resulted. Students placed in high ability groups had the highest mean SES and those in the low groups, the lowest mean SES. Again, the differences in group means were statistically significant.

We found that teachers "misplaced" 26 percent of their students and examined the criteria teachers said they used to place children in different groups than shown to be appropriate on the basis of test scores. Teachers appeared to rely mainly on criteria related to perceived ability, achievement and work habits. However, some students were misplaced on the basis of non-academic criteria—those categorized as classroom adjustment or ascribed characteristics. These two categories included percepts related to a student's maturity, behavior, emotional adjustment, verbality, family background, sex and physical characteristics. Our data show that teachers

used these non-academic criteria in contradictory ways. Some students whose ability and achievement indicated they were above average were apparently "misplaced" downwardly by teachers on the basis of negative ascribed characteristics and classroom adjustment criteria. Others whose ability was judged low or below average and who were described with negative non-academic percepts were moved upward. Teachers may have "misplaced" these students into higher groups in an attempt to help them overcome the handicaps of poor home background or poor classroom adjustment.

Due to this inconsistent use of non-academic criteria, classroom reading ability groups in our sample showed little overall increase in segregation as a consequence of teacher judgment. Even though teachers "misplaced" students, moving up higher status children and moving down lower status children, they added little to the segregation already accounted for by the use of reading test scores as the only grouping criterion. As a result of using the variance of SES scores of students in a reading group as a measure of socioeconomic segregation, we found that slightly over half (55 percent) of the classroom reading groups formed by teachers were more segregated than comparable reading test score groups. In these groups teachers were putting students with similar backgrounds together. However, in the remaining classroom groups, the variances of SES scores increased, indicating less segregation. These findings offer equivocal support to the commonly held belief that teachers are furthering socioeconomic segregation in their classrooms by using criteria for grouping which are related to students' socioeconomic status.

Because this study utilized a convenience sample of classrooms, results cannot be generalized to the population at large. However, we feel that some of our findings are worth noting by educators. This study points to

the need for helping teachers deal with the decisions involved in grouping students. Teachers' judgments are crucial to the grouping process, for most schools recognize that the decision to place a child in an ability group is far too important to rely on objective tests alone for placement. Teachers should be aware of the criteria they are using for grouping students and how they are applying these criteria.

For instance, it seems important to note that criteria teachers say they use for grouping children for reading are related to those children's SES. That is, teachers tend to perceive higher SES students in a more positive manner than lower SES students. Teachers may be perceiving higher SES students as being more capable and placing them in higher groups than warranted by their ability. Conversely, teachers' negative perceptions of students may be contributing to downward misplacement of lower SES students.

At least 30 percent of the criteria teachers said they were using for grouping students for reading can be considered non-academic. Teachers should recognize that these may or may not be valid criteria for placing students in ability groups. Our data indicate that negative percepts in these two categories weigh fairly heavily in the placement of children in reading groups lower than warranted by their ability. However, we also found that some teachers may be using these criteria in ways which may benefit some children. They appeared to be recognizing the handicaps of poor classroom adjustment and ascribed characteristics and moving children to higher groups in an apparent attempt to compensate. Since non-academic criteria were used in inconsistent ways, it appears that some teachers may be unaware they are using these criteria. Assuming that schools continue to use ability grouping, it seems desirable to explore ways to assist teachers in making equitable grouping decisions.

FOOTNOTES

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(Chi square analysis was used to determine which test items discriminated.)